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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,282	04/08/2004	Steven R. Benson	31,625-01RE	1036

7590 03/22/2005

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EXAMINER

CHARLES, MARCUS

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,282

Applicant(s)

BENSON, STEVEN R.

Examiner

Marcus Charles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-08-04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is the first action relating to serial application number 10/821,282, filed 04-08-2004.

Claims 1-21 are currently pending.

Oath/Declaration

1. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

Reissue Applications

No off to Surrender Original Patent

2. This reissue application was filed without the required offer to surrender the original patent or, if the original patent is lost or inaccessible, an affidavit of declaration to that effect. The original patent, or affidavit of declaration as to loss or inaccessibility of the original patent, must be received before the reissue application can be allowed. See 37 CFR 1.178.

Information Disclosure Statement

3. The information disclosure statement filed 04-08-2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the application serial number 08/618,259 does not match the immediate application number 10/821,282. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the

statement, including all certification requirements for statements under 37 CFR 1.97(e).

See MPEP § 609 ¶ C(1).

Specification

4. The disclosure is objected to because of the following informalities: in column 4, the last line, there are two punctuation marks after "Heretofore". It is suggested to delete one of the two. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The intended scope of the claim is confusing because it is not clear as to what is meant by the phrase "wherefrom two like, oppositely sloping, flat surfaces slope to the roller sides or the sloping cam track surface sides. In addition, it appears that the claim is incomplete.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Togami et al. Togami et al. discloses a CVT comprises a drive belt (8), a spilt pulley with a pair of

upper and lower sheaves with a V belt engaging groove there between, a cylindrical cam means (112) maintain to extends outwardly from the upper half (82), and including a plurality of equally spaced identical cam sections each including a similar sloping cam track; a shaft (94) extending through a hub (82); a carrier (128) includes a plurality of cam followers which includes rolling means (143) that rolls along the sloped curved cam track surface, and a spring biasing means (140) biasing the carrier from the pulley half.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marier (4,585,429) in view of Togami et al. (4,173,155). Marier discloses a CVT comprising upper and lower pulleys sheaves (6f/6m), which forms a V-groove there between so as to received a belt (7); a cylindrical cam means maintain to extends outwardly from the from the upper half (6f), and including a plurality of equally spaced identical right angle cam sections each including a similar sloped came track on the hypotenuse of the triangle; a shaft (13) extending through a hub (14); a carrier (16) includes a plurality of cam followers which includes ball bearing means that rolls along the sloped curved cam track surface, and a spring (17) biasing the carrier from the pulley half. Marier does not disclose the bearings include rollers bearing means.

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Togami et al. discloses a CVT comprising a carrier (128), which includes a plurality of rollers for contacting the sloping cam surfaces (124) in order to maintain smooth and regular axial motion of the pulley sheaves. Therefore it would have been obvious to one of ordinary skill in the art to modify the device of Marier so that the bearing balls are rollers in view of Togami et al. in order to maintain smooth and regular axial motion of the pulley sheaves.

In claim 4, Marier discloses the claimed invention including the spring is disposed on the shaft between the sheave and the carrier means.

In claim 7, Marier and Togami et al. disclose the cam cone includes a bottom that secures to the pulley sheave.

11. Claims 2, 3, 9-10, 14 and 15, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mairer in view of Togami et al. as applied to claim 1 and further in view of Gesche et al. (3,224,287). Mairer and Togami et al. do not disclose the roller contact surface is formed with a convex surface. Gesche et al. disclose a CVT having a plurality of cam surfaces and convex shape roller bearing means contacting the cam surface in order to reduced friction between the contact surfaces. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the roller bearing of Mairer in view of Togima et al. so that the contact bearing surface is convex in view of Gesche et al. in order to reduced friction between the contact surfaces.

12. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togami et al in view of Gesche et al. (3,224,287), Togami et al. do not disclose the roller

contact surface is formed with a convex surface. Gesche et al. disclose a CVT having a plurality of cam surfaces and convex shape roller bearing means contacting the cam surface in order to reduced friction between the contact surfaces. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the roller bearing of Togima et al. so that the contact-bearing surface is convex in view of Gesche et al. in order to reduced friction between the contact surfaces.

13. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Togami et al in view of Mairer. Togami et al. do not disclose that the cam sections are right angle triangle. Mairer discloses A CVT with cam sections, each having a shape of a right angle triangle in order to attain a satisfactory drive ratio and to be able to continuously smoothly vary the shift between the pulleys with reduced friction.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cam sections of Togami et al. to include right angle sections in view of Mairer in order to attain a satisfactory drive ratio and to be able to continuously smoothly vary the shift between the pulleys with reduced friction.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 5,516,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious variations in breadth and scope.


Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP(05-26327), Berardicurti (5,538,129 and 5,538,129), Doza (4,380,44), Bessette (2,900,834), Bessette (3,800,608), Steur (3,722,308), Pauli (3,195,364), Shadrack (2,283,392), Bowers (3,884,316), Teijido et al.(4,321,991), Huff et al.(4,378,221) and Smith et al. (5,403,240) disclose a CVT with a cam surface for manipulating the axial movements of the fix and moveable sheaves.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (703) 305-6877. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Marcus Charles
Primary Examiner
Art Unit 3682
March 10, 2005